

**TECHNICAL SYSTEMS AUDIT
OF THE
ALLEGHENY COUNTY HEALTH DEPARTMENT
2019**

Conducted by US EPA Region 3
Air & Radiation Division
Air Quality Analysis Branch

October 2019

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1.0 EXECUTIVE SUMMARY

This document is a final report on the findings made by the United States Environmental Protection Agency (EPA), Region 3 Air & Radiation Division, Air Quality Analysis Branch, following a Technical Systems Audit (TSA) of the Allegheny County Health Department (ACHD) ambient air monitoring program in accordance with 40 CFR 58 Appendix A Section 2.5:

"Technical systems audits of each PQAQ shall be conducted at least every 3 years by the appropriate EPA Regional Office and reported to the AQS."

A TSA is an on-site review and inspection of a state or local agency's ambient air monitoring program to assess its compliance with established regulations governing the collection, analysis, validation, and reporting of ambient air quality data. It includes (but is not limited to) on-site interviews with key program personnel; laboratory assessments; evaluations of ambient air monitoring sites operated by state or local air agencies; and reviews of quality assurance activities and data reported to EPA's Air Quality System (AQS).

The TSA primarily focused on ACHD's: network management, quality assurance/quality control, data management, field operations, and the Allegheny County Medical Examiner's Office (ACOME) laboratory. Region 3 identified 11 findings, and several observations. Those findings are discussed in detail with recommendations and corrective actions in Section 3 of this report. The most significant findings are:

- PM_{2.5} and PM₁₀ monitor inlets spaced less than 2 m apart at South Fayette
- Unacceptable probe materials used for trace SO₂ and CO at Lawrenceville

In general, R3 found that ACHD operates and maintains a satisfactory ambient air monitoring program. ACHD and ACOME continue to provide excellent cooperation with EPA Region 3 staff in supporting the common goal to protect human health and the environment by monitoring criteria air pollutants. EPA greatly appreciates the efforts made by ACHD and ACOME to make the 2019 TSA a success.

2.0 INTRODUCTION

Allegheny County's Air Quality Program (AQP) is a division of the ACHD. The ACHD-AQP operates a diverse air monitoring network consisting of 13 sites (Figure 1) that monitor and sample for sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), total reactive nitrogen (NO_y), ozone (O_3), particulate matter with a diameter less than or equal to $10\ \mu$ (PM_{10}), particulate matter with a diameter less than or equal to $2.5\ \mu$ ($\text{PM}_{2.5}$), particulate matter with a diameter less than $10\ \mu$, but greater than $2.5\ \mu$ ($\text{PM}_{\text{coarse}}$), and air toxics (TO-11, TO-15, hazardous air pollutant [HAP] metals, and black carbon). ACHD-AQP's air monitoring network sites are designated as State and Local Air Monitoring Stations (SLAMS), National Core (NCore), Photochemical Assessment Monitoring Station (PAMS), and Special Purpose Monitor (SPM).

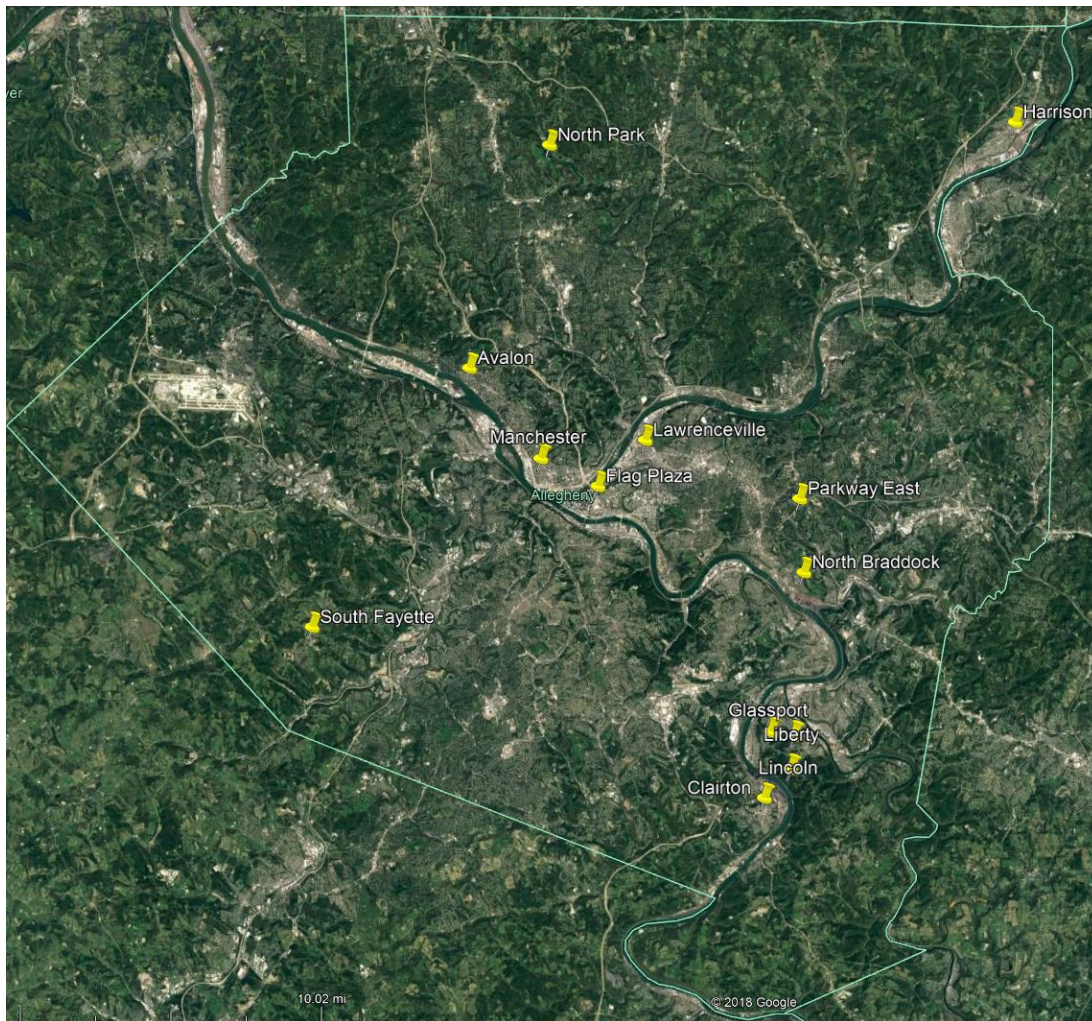


FIGURE 1: ACHD Air Monitoring Sites (ACHD 2020 Air Monitoring Network Plan)

The Air Quality Program (AQP) receives external analytical support from state, local, and EPA national contracting laboratories. Table 1, lists the laboratories utilized by AQP and the pollutants analyzed.

TABLE 1: ANALYTICAL SUPPORT LABORATORIES

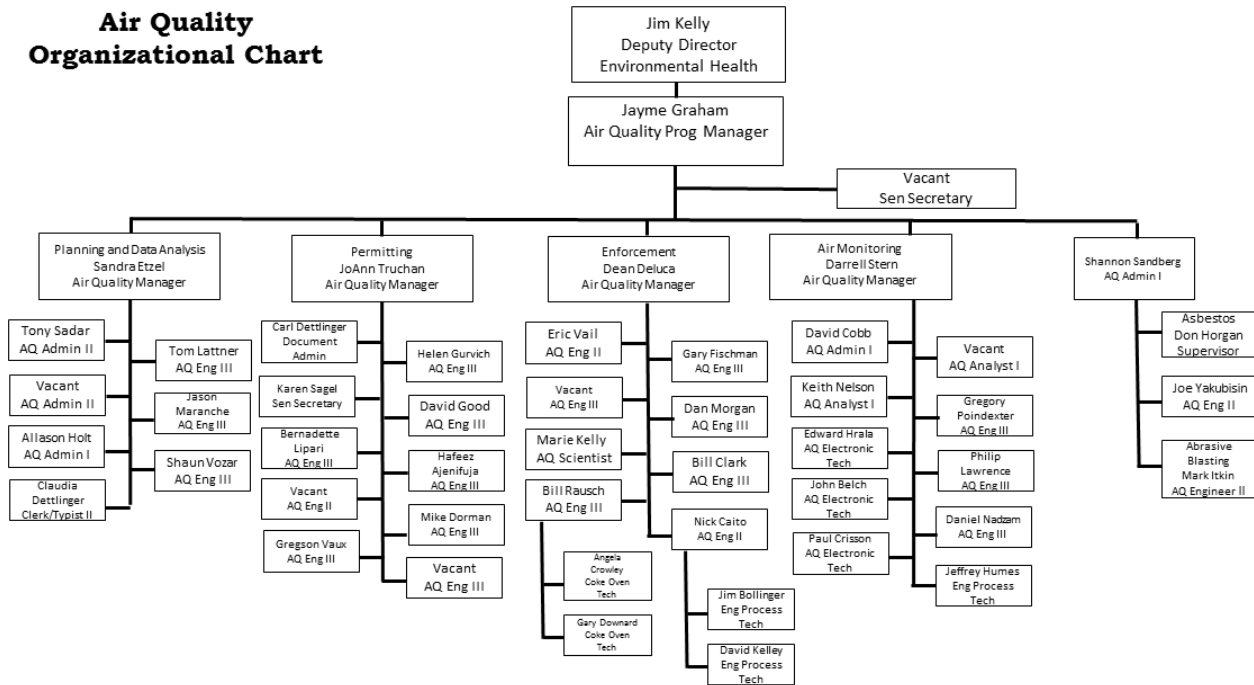
LABORATORY	POLLUTANTS ANALYZED
Allegheny County Health Department Public Health Laboratory 3901 Penn Ave., Bldg. #8 Pittsburgh, PA 15224	PM _{2.5} , PM ₁₀ (gravimetric analysis)
US EPA National Contract Lab Research Triangle Park, NC 27711	PM _{2.5} Chemical Speciation
West Virginia Department of Environmental Protection / Division of Air Quality 255 Gus R. Douglass Lane Charleston, WV 25312	HAP Metals
Maryland Department of Environmental Protection 1800 Washington Blvd. Baltimore, MD 21230	Volatile Organic Compounds (VOCs, TO-15)
City of Philadelphia /Department of Public Health, AMS Laboratory 1501 E Lycoming St. Philadelphia, PA 19124	Carbonyls (TO-11)

Region 3's audit team consisting of Verena Joerger, Kia Long, and Loretta Hyden conducted a TSA of ACHD's air monitoring network July 15-18, 2019. The audit team inspected all monitoring sites (Figure 1), ACOME's PM weigh lab, and reviewed QA/QC practices and documentation. ACHD and ACOME TSA participants are shown in Table 2.

TABLE 2: TSA PARTICIPANTS

ALLEGHENY COUNTY HEALTH DEPARTMENT / AIR QUALITY PROGRAM	
NAME	POSITION
Darrell Stern Jr.	Air Quality Manager
Daniel Nadzam	Quality Assurance Supervisor
Jason Maranche	Data Analysis
Ed Hrala	Field Technician
Keith Nelson	Field Technician
Paul Crisson	Field Technician
Allason Holt	Quality Assurance Administrator
Shaun Vozar	Data Analyst
ALLEGHENY COUNTY MEDICAL EXAMINER'S OFFICE	
Joshua Yohannan	Environmental Chemistry Manager
Michelle Kotsagrellos	Section Scientist
EPA REGION 3	
Verena Joerger	Quality Assurance Coordinator
Kia Long	Quality Assurance Coordinator
Loretta Hyden	Air Monitoring Technical Lead

Air Quality Organizational Chart



Edited 11/26/2018

FIGURE 2: ACHD Air Quality Organizational Chart

3.0 TSA FINDINGS

This section lists audit findings made by the EPA Region 3 audit team. In July 2019, Region 3 sent an initial audit findings summary (Appendix A) to ACHD and ACOME for their review. The findings were discussed between ACHD, ACOME, and Region 3 on a TSA close-out call on July 26, 2019. ACHD responded to the findings summary on 8/29/2019; those comments are included in this section. Region 3 found issues in the areas of quality assurance/quality control, laboratory, and field operations.

TSA findings are categorized and defined as:

Major	Nonconformance of high importance which is unacceptable and must be remedied. Such nonconformances impact data quality, indicate unacceptable procedures are in use (per guidance documents), endanger staff members, and/or obscure the traceability of data.
Minor	Nonconformance of somewhat lesser importance as compared to a major finding, but one that should be remedied. Such nonconformances have marginal impact on data quality. Action taken to address such nonconformances will yield improvements in data quality and/or bring procedures into full compliance with guidance documents and/or quality system standards.
Observation	Either a nonconformance with no impact to data quality or a recommendation for an improved or best practice

QUALITY ASSURANCE (QA)

Finding QA-1: Expired SO₂ gas cylinder

Finding Type: MINOR

Discussion: Cylinder serial number: CC14928 expired on 6/17/19 but was located with the SO₂ analyzer. The cylinder may no longer contain the stable concentration necessary to perform QC checks.

Recommendation/Corrective Action: Discontinue use of the cylinder and remove it from the site. Or, recertify the cylinder for continued use.

ACHD Response: *Has been used since expiring. Was compared before removing from site on 8/28/19. See additional worksheet. Please advise how to flag data.*

LABORATORY (LAB)

Finding LAB-1: Weigh analyst does not sign off on PM_{2.5} chain of custody (COC) form or record temperature at receipt

Finding Type: MINOR

Discussion: The current PM_{2.5} COC form does not include a place for the weigh lab analyst to sign when they retrieve the filters from the sample receipt holding area. In addition, the temperature at receipt, and before being placed into the weigh lab refrigerator, is not recorded. This may pose an issue as it can be an hour or more before samples are picked up by a weigh lab analyst and the samples are outside of a cooler during this time period.

Recommendation/Corrective Action: Update the COC form to include a space for the weigh lab analyst to sign off when they have picked up the samples from the sample receiving area. Also, include a place for the weigh lab analyst to record the temperature before the samples are placed into the refrigerator. To begin recording the temperature for this stage in sample receipt, the weigh room group may want to

consider keeping a cooler with a min/max thermometer in the sample receiving area so that ACHD monitoring staff can transfer the samples from their cooler to the lab cooler.

ACOME Response: Lab scientist now initials and dates form. Also watches as person transferring filters checks temperature at sample receiving area.

Finding LAB-2: No COC form with PM₁₀ samples

Finding Type: MINOR

Discussion: While the weigh lab internally tracks PM₁₀ samples, there is not COC form accompanying the samples to and from the field.

Recommendation/Corrective Action: Implement COC procedure for PM₁₀ samples. R3 suggests one way to do so would be to modify the PM₁₀ shipping envelope to include signature/initial and date lines for those in possession of the sample.

ACOME Response: Filter envelopes are initial/dated by field technician and lab scientist.

Finding LAB-3: Laboratory refrigerator thermometers not verified or certified

Finding Type: MINOR

Discussion: The PM laboratory refrigerators where samples are stored post-sampling contain thermometers that are monitored by laboratory staff but have not been verified or certified since purchase. Without verification against a NIST traceable reference thermometer, there is no way to know the accuracy of the refrigerator thermometers.

Recommendation/Corrective Action: Thermometers in laboratory refrigerator should be verified against a valid, NIST traceable standard, or replaced on an annual basis.

ACOME Response: Laboratory has purchased new NIST traceable thermometers

FIELD SITE EVALUATION (FSE)

Finding FSE-1: PM_{2.5} and PM₁₀ monitor inlets are less than 2 m apart

Finding Type: MAJOR





Discussion: The PM_{2.5} and PM₁₀ monitor inlets were observed to be only 1.8 meters apart. Since the PM₁₀ monitor is considered a hi-vol sampler, the two PM instruments must be at least 2 meters apart (inlet to inlet).

Recommendation/Corrective Action: Move the samplers apart to meet siting requirement of at least 2 meters apart.

ACHD Response: *Hi-Vol and FRM have been separated to at least 2 meters.*

Finding FSE-2: Unacceptable probe materials used for trace SO₂ and CO

Finding Type: MAJOR



Discussion: The trace SO₂ and CO analyzer inlets at Lawrenceville are not made of acceptable probe material. "Of the probe and manifold material looked at over the years, only Pyrex® glass and Teflon® have been found to be acceptable for use as intake sampling lines for all the reactive gaseous pollutants...borosilicate glass (which includes Pyrex®), FEP Teflon® or their equivalent must be the only

material in the sampling train (from inlet probe to the back of the analyzer)" QA Handbook, Vol. II, Section 7.0.

Recommendation/Corrective Action: The probes and any other portions of the sampling train for the continuous gas instruments not currently composed of acceptable materials must be replaced.

ACHD Response: *Stainless steel fittings have been removed. Teflon is now the only probe material.*

Finding FSE-3: Data logger pollutant concentrations do not match instrument face

Finding Type: MINOR

Discussion: R3 auditors observed the data logger reading different concentrations of SO₂ than the instrument face. The instrument face was reading 0.7 ppb, while the data logger read 0.00146.

Recommendation/Corrective Action: Verify the connection from the SO₂ instrument to the data logger.

ACHD Response: *A digital to analog converter calibration was performed on the SO₂ analyzer. Analyzer concentrations more closely match the data logger.*

Finding FSE-4: Meteorological instruments sited below 10 m

Finding Type: MINOR

Discussion: The meteorology instruments at North Braddock appeared to be less than 10 meters above ground level. Siting criteria for wind speed/direction sensors must be 10 meters above ground. See Volume IV: Meteorological Measurements Version 2.0 Table 0.12.

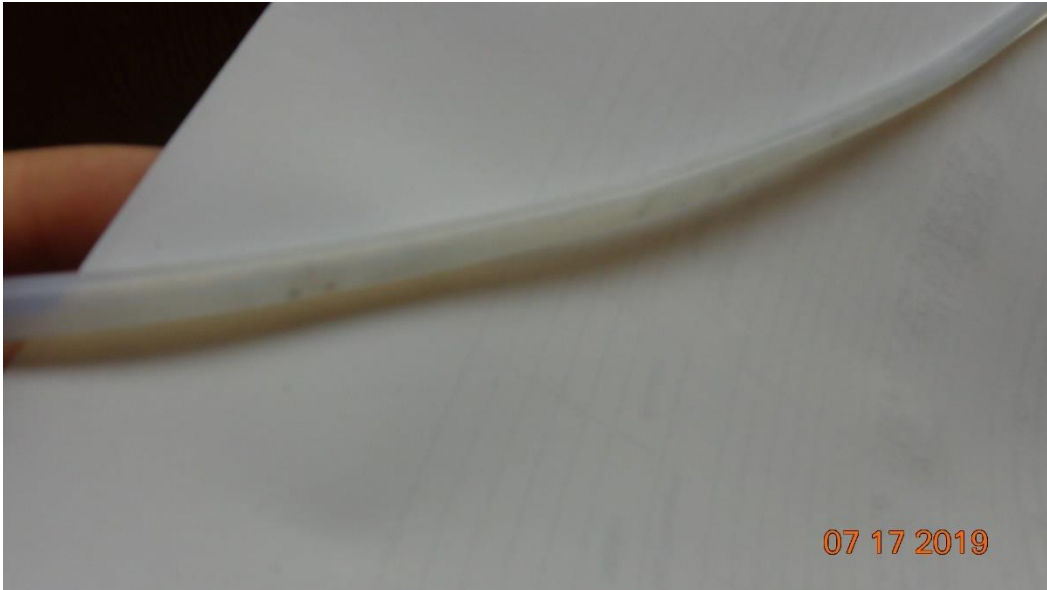
Recommendation/Corrective Action: Verify the meteorological instrument height and (if needed) raise the instruments to the required height of 10 meters.

ACHD Response: *This item will be addressed as resources become available.*

Finding FSE-5: Dirty gas analyzer sample lines

Finding Type: MINOR





Discussion: The ends of the probe lines for many gas analyzers contained dirt. In addition, the sample line within the shelter at Avalon leading to the SO₂ analyzer (CM10310072) was dirty. "Sample probes or manifolds which capture moisture, dirt, or debris may result in biased data collection, as well as pose a risk to the analyzer, should contaminants enter the instrument. Operators should inspect the condition of sample lines and manifolds to ensure they are clean and condensation-free during each visit. In some locations, and/or in certain seasons, monitoring agencies may need to increase their cleaning frequencies" (QA Handbook, Vol. II, Section 7.0).

Recommendation/Corrective Action: Increase the frequency of inspection and cleaning (or replacement, when needed) of sample inlets and lines.

ACHD Response: *Will increase the frequency of inspection and cleaning of sample inlets and lines at the 5 sites listed.*

Finding FSE-6: Continuous gas analyzer shelter temperature outside of instrument operating range

Finding Type: MINOR

Discussion: The Harrison shelter temperature was 30.9°C upon arrival by R3 auditors. "With respect to environmental temperature for analyzers designated as FRM or FEM, most analyzers have been tested and qualified over a temperature range of 20 to 30°C... Sites that continually have problems maintaining adequate temperatures may necessitate additional temperature control equipment or rejection of the area as a sampling site" (QA Handbook, Vol. II, Section 7.0). The Thermo 49i has an operating temperature range of 20-30°C.

Recommendation/Corrective Action: Monitor the shelter temperature and instrument performance carefully. If the shelter temperature is routinely out of specifications, additional temperature controls may be needed.

ACHD Response: *This item will be addressed as a viable conceptual design is developed. E.G. an air-conditioned analyzer rack.*

Finding FSE-7: Refrigerator thermometer not verified or certified and temperature out of specifications defined by ACHD QAPP

Finding Type: MINOR



Discussion: The refrigerator used to store samples at Lawrenceville was observed to be maintaining a temperature above 4°C. Per ACHD's PM_{2.5} QAPP, "Once the operator is back at the AQP office, he moves all sample boxes from the temporary transport cooler into a storage refrigerator maintained between 1°C and 4°C. Under the Field Activities heading, he records the final cooler temperature and initials the field tech area. Sample transport boxes are accumulated at the office until they are transported back to the analytical laboratory". In addition, the refrigerator thermometer has not been verified or certified since purchase. The refrigerator thermometer should be routinely verified against a NIST-traceable standard, certified by the manufacturer, or replaced (at least annually).

Recommendation/Corrective Action: Verify the thermometer in the Lawrenceville refrigerator. Initiate a schedule to routinely verify/certify/replace the refrigerator thermometer, as well as monitor the temperature as directed by the PM_{2.5} QAPP.

ACHD Response: *Will obtain another refrigerator having an external temperature readout. Will also document NIST traceability of thermometers used for PM_{2.5} sample handling.*

Finding FSE-8: Instrument serial numbers not visible or accessible

Finding Type: OBSERVATION

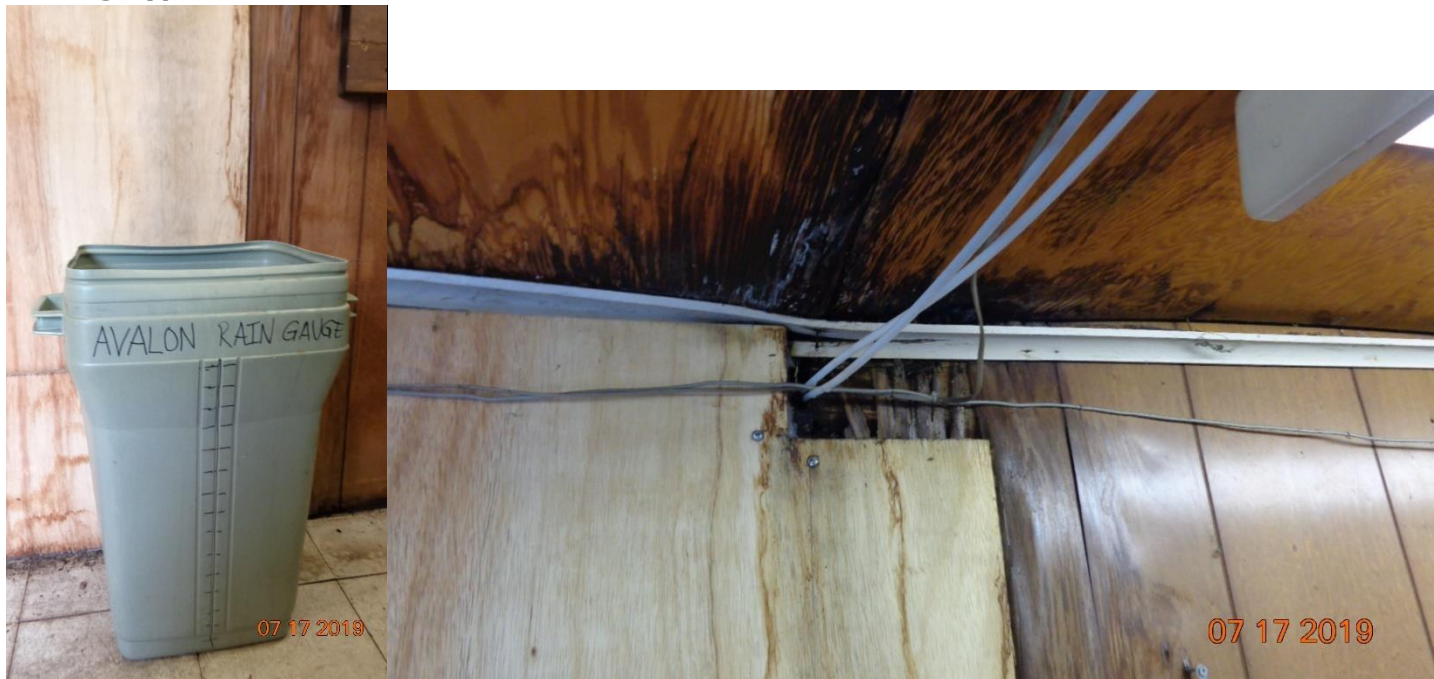
Discussion: At multiple sites, R3 auditors were unable to access instrument serial numbers. In some cases, the instrument serial number was written on the face of the instrument, but log books contained a different serial number for the same instrument. There appeared to be two different ways of referring to the instruments 1) a serial number assigned by ACHD, 2) the instrument manufacturer serial number. EPA R3 records instrument serial numbers on audits to be able to easily refer to specific instruments and track instruments in log books.

Recommendation/Corrective Action: Standardize the instrument serial numbers used to refer to specific instruments in log books and other records (either manufacturer or ACHD number). For instruments where serial numbers cannot easily be accessed, write or place a sticker on the front of the instrument legibly displaying the serial number.

ACHD Response: *Will implement SOPS to use only instrument serial numbers (not asset tag numbers).*

Finding FSE-9: Evidence of water entering the shelter

Finding Type: OBSERVATION



Discussion: Water damage was observed on the ceiling, wall, and floor of the Avalon shelter. Water entering the shelter can lead to instrument error and even damage, resulting in the loss of data.

Recommendation/Corrective Action: The Avalon shelter should be replaced as soon as possible.

ACHD Response: *Duly noted.*

Finding FSE-10: Food kept in sample refrigerator

Finding Type: OBSERVATION



Discussion: Food was found in the refrigerator used to keep samples at Lawrenceville. Keeping items other than samples in the refrigerator places the samples at risk for contamination.

Recommendation/Corrective Action: Maintain separate refrigerators for samples and food.

ACHD Response: *See also FSE-7.*

Finding FSE-11: Safety concern with instrument platform

Finding Type: OBSERVATION



Discussion: Support brackets on the Lincoln platform are no longer attached in some sections. The platform's stability and structural integrity may be compromised.

Recommendation/Corrective Action: Repair or replace the platform at Lincoln.

ACHD Response: *Duly noted.*

Appendix A: ACHD Response to 2019 U.S. EPA TSA Findings

Allegheny Health Department (ACHD) Technical Systems Audit (TSA) 2019 Finding Summary							
QUALITY ASSURANCE (QA)							
FINDING No.	Finding Type	SITE/ PROGRAM	AIRS CODE	FINDING	DISCUSSION	CORRECTIVE ACTION / RECOMMENDATION	ACHD Comments
QA-1	MINOR	South Fayette	42-003-0067	Expired SO ₂ gas cylinder	Cylinder serial number: CC14928 expired on 6/17/19 but was located with the SO ₂ analyzer. The cylinder may no longer contain the stable concentration necessary to perform QC checks.	Discontinue use of the cylinder and remove it from the site. Or, recertify the cylinder for continued use.	Has been used since expiring. Was compared before removing from site on 8/28/19. See additional worksheet. Please advise how to flag data.
LABORATORY (LAB)							
FINDING No.	Finding Type	SITE	PROGRAM	FINDING	DISCUSSION	CORRECTIVE ACTION / RECOMMENDATION	ACMEO & ACHD Comments
LAB-1	MINOR	ACMEO Forensics Lab/ Enviro. Chem.	PM _{2.5} filter weighing	Weigh lab analyst does not sign off on PM _{2.5} chain of custody (COC) form or record temperature at receipt	The current PM _{2.5} COC form does not include a place for the weigh lab analyst to sign when they retrieve the filters from the sample receipt holding area. In addition, the temperature at receipt, and before being placed into the weigh lab refrigerator, is not recorded. This may pose an issue as it can be an hour or more before samples are picked up by a weigh lab analyst and the samples are outside of a cooler during this time period.	Update the COC form to include a space for the weigh lab analyst to sign off when they have picked up the samples from the sample receiving area. Also, include a place for the weigh lab analyst to record the temperature before the samples are placed into the refrigerator. To begin recording the temperature for this stage in sample receipt, the weigh room group may want to consider keeping a cooler with a min/max thermometer in the sample receiving area so that ACHD monitoring staff can transfer the samples from their cooler into the lab cooler.	Lab scientist now initials and dates form. Also watches as person transferring filters checks temperature at sample receiving area.
LAB-2	MINOR	ACMEO Forensics Lab/ Enviro. Chem.	PM ₁₀ filter weighing	No COC form with PM ₁₀ samples	While the weigh lab internally tracks PM ₁₀ samples, there is no COC form accompanying the samples to and from the field.	Implement COC procedure for PM ₁₀ samples. R3 suggests one way to do so would be to modify the PM ₁₀ shipping envelope to include signature/initial and date lines for those in possession of the sample.	Filter envelopes are initial/dated by field technician and by lab scientist
LAB-3	MINOR	ACMEO Forensics Lab/ Enviro. Chem.	PM _{2.5} filter weighing	Laboratory refrigerator thermometers not verified or certified	The PM laboratory refrigerators where samples are stored post-sampling contain thermometers that are monitored by laboratory staff, but have not been verified or certified since purchase. Without verification against a NIST traceable reference thermometer, there is no way to know the accuracy of the refrigerator thermometers.	Thermometers in laboratory refrigerator should be verified against a valid NIST traceable standard or replaced on an annual basis	Laboratory has purchased new NIST traceable thermometers

FIELD SITE EVALUATIONS (FSE)

FINDING No.	Finding Type	SITE	AIRS CODE	FINDING	DISCUSSION	CORRECTIVE ACTION / RECOMMENDATION	ACHD Comments
FSE-1	MAJOR	South Fayette	42-003-0067	PM _{2.5} and PM ₁₀ monitor inlets are less than 2 m apart	The PM _{2.5} and PM ₁₀ monitor inlets were observed to be only 1.8 meters apart. Since the PM ₁₀ monitor is considered a hi-vol sampler, the two PM instruments must be at least 2 meters apart (inlet-to-inlet).	Move the samplers apart to meet siting requirement of at least 2 meters apart.	Hi-Vol and FRM have been separated to at least 2 meters.
FSE-2	MAJOR	Lawrenceville	42-003-0008	Unacceptable probe materials used for trace SO ₂ and CO	The trace SO ₂ and CO analyzer inlets at Lawrenceville are not made of acceptable probe material. "Of the probe and manifold material looked at over the years, only Pyrex® glass and Teflon® have been found to be acceptable for use as intake sampling lines for all the reactive gaseous pollutants...borosilicate glass (which includes Pyrex®, FEP Teflon® or their equivalent must be the only material in the sampling train (from inlet probe to the back of the analyzer)" QA Handbook, Vol. II, Section 7.0.	The probes and any other portions of the sampling train for the continuous gas instruments not currently composed of acceptable materials must be replaced.	Stainless steel fittings have been removed. Teflon is now the only probe material.
FSE-3	MINOR	North Braddock	42-003-1301	Data logger pollutant concentrations do not match instrument face	R3 auditors observed the data logger reading different concentrations of SO ₂ than the instrument face. The Instrument face was reading 0.7ppb, while the data logger read 0.00146.	Verify the connection from the SO ₂ instrument to the data logger.	A digital to analog converter calibration was performed on the SO ₂ analyzer. Analyzer concentrations more closely match the data logger.
FSE-4	MINOR	North Braddock	42-003-1301	Meteorological instruments sited below 10 m	The meteorology instruments at North Braddock appeared to be less than 10 meters above ground level. Siting criteria for wind speed/direction sensors must be 10 meters above ground. See Volume IV: Meteorological Measurements Version 2.0 Table 0.12.	Verify the meteorological instrument height and (if needed) raise the instruments to the required height of 10 meters.	This item will be addressed as resources become available
FSE-5	Minor	South Fayette, Avalon, Parkway East, Harrison, and Liberty	42-003-0067, 42-003-0002, 42-003-1376, 42-003-1003, and 42-003-0064	Dirty gas analyzer sample lines	The ends of the probe lines for many gas analyzers contained dirt. In addition, the sample line within the shelter at Avalon leading to the SO ₂ analyzer (CM10310072) was dirty. "Sample probes or manifolds which capture moisture, dirt, or debris may result in biased data collection, as well as pose a risk to the analyzer, should contaminate enter the instrument. Operators should inspect the condition of sample lines and manifolds to ensure they are clean and condensation-free during each visit. In some locations, and/or in certain seasons, monitoring agencies may need to increase their cleaning frequencies" (QA Handbook, Vol. II, Section 7.0).	Increase the frequency of inspection and cleaning (or replacement, when needed) of sample inlets and lines.	Will increase the frequency of inspection and cleaning of sample inlets and lines at the 5 sites listed.
FSE-6	Minor	Harrison	42-003-1003	Continuous gas analyzer shelter temperature outside of instrument operating range	The Harrison shelter temperature was 30.9°C upon arrival by R3 auditors. "With respect to environmental temperature for analyzers designated as FRM or FEM, most analyzers have been tested and qualified over a temperature range of 20 to 30°C... Sites that continually have problems maintaining adequate temperatures may necessitate additional temperature control equipment or rejection of the area as a sampling site" (QA Handbook, Vol. II, Section 7.0). The Thermo 491 has an operating temperature range of 20-30°C.	Monitor the shelter temperature and instrument performance carefully. If the shelter temperature is routinely out of specifications, additional temperature controls may be needed.	This item will be addressed as a viable conceptual design is developed. E.G. an air-conditioned analyzer rack.
FSE-7	MINOR	Lawrenceville	42-003-0008	Refrigerator thermometer not verified or certified and temperature out of specifications defined by ACHD QAPP	The refrigerator used to store samples at Lawrenceville was observed to be maintaining a temperature above 4°C. Per ACHD's PM _{2.5} QAPP, "Once the operator is back at the AQP office, he moves all sample boxes from the temporary transport cooler into a storage refrigerator maintained between 1°C and 4°C. Under the Field Activities heading, he records the final cooler temperature and initials the field tech area. Sample transport boxes are accumulated at the office until they are transported back to the analytical laboratory". In addition, the refrigerator thermometer has not been verified or certified since purchase. The refrigerator thermometer should be routinely verified against a NIST-traceable standard, certified by the manufacturer, or replaced (at least annually).	Verify the thermometer in the Lawrenceville refrigerator. Initiate a schedule to routinely verify/certify/replace the refrigerator thermometer, as well as monitor the temperature as directed by the PM _{2.5} QAPP.	Will obtain another refrigerator having an external temperature readout. Will also document NIST traceability of thermometers used for PM _{2.5} sample handling.
FSE-8	Observation	Multiple	Multiple	Instrument serial numbers not visible or accessible	At multiple sites, R3 auditors were unable to access instrument serial numbers. In some cases, the instrument serial number was written on the face of the instrument, but log books contained a different serial number for the same instrument. There appeared to be two different ways of referring to the instruments 1) a serial number assigned by ACHD, 2) the instrument manufacturer serial number. EPA R3 records instrument serial numbers on audits to be able to easily refer to specific instruments and track instruments in log books.	Standardize the instrument serial numbers used to refer to specific instruments in log books and other records (either manufacturer or ACHD number). For instruments where serial numbers cannot easily be accessed, write or place a sticker on the front of the instrument legibly displaying the serial number.	Will implement SOPS to use only instrument serial numbers (not asset tag numbers).
FSE-9	OBSERVATION	Avalon	42-003-0002	Evidence of water entering the shelter	Water damage was observed on the ceiling, wall, and floor of the Avalon shelter. Water entering the shelter can lead to instrument error and even damage, resulting in the loss of data.	The Avalon shelter should be replaced as soon as possible.	Duly noted.
FSE-10	OBSERVATION	Lawrenceville	42-003-0008	Food kept in sample refrigerator	Food was found in the refrigerator used to keep samples at Lawrenceville. Keeping items other than samples in the refrigerator places the samples at risk for contamination.	Maintain separate refrigerators for samples and food.	See also FSE-7.
FSE-11	OBSERVATION	Lincoln	42-003-7004	Safety concern with instrument platform	Support brackets on the Lincoln platform are no longer attached in some sections. The platform's stability and structural integrity may be compromised.	Repair or replace the platform at Lincoln	Duly noted.

Hello,												
I did SO2 and Ozone PCs at South Fayette today. I replaced the SO2 tank at the site, and tested a span point with each tank:												
	Expected value	Actual value										
Old tank	40 ppb	39 ppb										
New tank	40 ppb	40 ppb										
The results only had a difference of about 0.3ppb, but with rounding this is what I logged.												
I brought the old tank back and placed it in the “MT” section in the tank room.												
The Ozone PC passed as well.												
David Daniel Cobb, MES												
Air Pollution Administrator												
Air Quality Program												
301 39 th St, Bldg 7												
Pittsburgh, PA 15201												
412.578.8131												